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EXAMINER

DICKERSON, CHAD S

ART UNIT

PAPER NUMBER

2625

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/660,723	Applicant(s) AKIYOSHI ET AL.	
	Examiner CHAD DICKERSON	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-26 and 28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-26 and 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>see IDS filed 4/15/2008 and 6/23/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-26 and 28 have been considered but are moot in view of the new ground(s) of rejection. The Amendment to the claims necessitated the new grounds of rejection. However, the reference of Fukui '135 is still applied to the respective claims. The reference of Fukui '135 does involve the process of installing programs on the image forming apparatus to control peripheral devices attached to the copier body in the system (i.e. see col. 14, line 28 – col. 18, line 65 of Fukui '135). The programs that are installed are different versions from the previous program and these programs are considered as new programs, since these programs of updated versions are different from the previous program that was not sufficient enough to allow the additional function to be performed. However, the specific mention of a determination unit to determine if a new program is installable is covered by the reference of Meade '966 listed below in the rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 1-26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukui '135 (US Pat No 5678135) in view of Maede '966 (US Pub No 2002/0140966) and Morita '326 (US Pub No 2002/0054326).

Re claim 1: Fukui '135 discloses an image forming apparatus including hardware resources for image formation **(i.e. the printer contains actual scanning and printing units, considered as hardware resources for image formation; see col. 4, In 40 – col. 5, In 40)**, an application for performing processes on the image formation **(i.e. different applications on the system are used to store data, fax data and perform printing of the data; see col. 12, In 38 – col. 13, In 16)** and a new application that performs interprocess communication with the control service in the same way as the application can be installed in the image forming apparatus **(i.e. in the system, the programs that are installed in the system are used to communicate with the CPU(b) (602), which controls the whole printing device in order for the image forming device to perform the associated feature. Both the old and new program, or application, installed on the apparatus communicates to the CPU(b) (602) in the same manner except that the apparatus has made the determination that the older program can not help the apparatus perform the additional function added to the system; see col. 7, In 8-col. 8, In 53, col. 14, In 28-67 and col. 15, In 1-52)**, the image forming apparatus comprising:

an installed application storage part **(i.e. the RAM (629 or 614) can be considered as the installed application storage part since this storage medium is**

used to store programs for the functions on the copier; see figs. 2, 3, 17 and 18; col. 14, lines 28-67 and col. 15, lines 1-52);

an application information obtaining part configured to obtain, from the new application, application information of the new application that includes information (i.e. in the procedure shown in figure 18, the copier body (301) checks to see if a version of the additional function, considered as the application, on the copier can be performed on efficiently on the copier. If it cannot be performed on the copier efficiently, the additional function is considered to be not installable and sends a request to the managing unit (2203) to send a new program to the copier so that the computer program can be installed and the additional function can be utilized in an efficient manner on the copier. The CCU (2201) sends updating programs to the copier when needed to utilize an added function, which are considered as new applications. The information that is included in the new application information is considered as the identification code that is used to communicate the version information of the additional function. With this identification code, the image forming apparatus can determine if another software program used to utilize the additional function is needed; see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1 – col. 18, line 65).

However, Fukui '135 fails to specifically teach information indicating whether the new application is installable in the image forming apparatus; and a determination part configured to determine whether the new application is installable in the installed application storage part based on the application information.

However, this is well known in the art as evidenced by Meade '966. Meade '966 discloses information indicating whether the new application is installable in the installed application storage part **(i.e. in the system, the printer checks the version number of the printer's current software to the latest, or new, software available. If the versions are the same, the printer determines that the software that is present at a pointer is not installable since the latest, or new, version is already present on the printer. In another scenario with the use of the host computer, the user is able to not authorize the update of the software to the printer. The software and the updated versions of the software are stored in the software component of the memory (320) in the printer. The above scenarios are both examples of the software having information pertaining to the programs that indicate whether the software is going to be installed in the printer's memory; figs. 1-3; paragraphs [0036]-[0045] and [0057]-[0059]); and**

a determination part configured to determine whether the new application is installable in the installed application storage part based on the application information **(i.e. in the system, depending on the version of the current software on the printer and the version at the pointer on the vender's or manufacturer's site, the printing system determines if the version used as an update is going to be installed in the printer. If it is determined that the software versions are the same, the software is determined to be not installable since the present program version is already on the printer. If the two are different with the update having a later version, the program is determined to be installable in the printer's memory based on the**

version information and the program is considered to be a new program to be installed; figs. 1-3; paragraphs [0036]-[0045] and [0057]-[0059]).

Therefore, in view of Meade '966, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of information indicating whether the new application is installable in the image forming apparatus and a determination part configured to determine whether the new application is installable in the installed application storage part based on the application information in order to determine if the system software should be updated (as stated in Meade '966 paragraph [0009]).

However, Fukui '135 in view of Meade '966 fails to specifically teach **the preamble limitations of** a platform that exists between the application and the hardware resources, the platform including an OS and at least one control service to control an execution of each requested processing of the hardware resources according to a function call from the application, wherein interprocess communication is performed between the control service and the application.

However, this is well known in the art as evidenced by Morita '326. Morita '326 discloses **the preamble limitations of** a platform that exists between the application and the hardware resources (**i.e. Morita contains the feature of being able to add and delete new applications to the printing system similar to Fukui and Meade. However, Morita '326 discloses a platform that is interposed between a common system service and an operating system, as shown in figure 1C; see fig. 1C; paragraphs [0018], [0049] and [0080]),**

the platform including an OS (**i.e. the general purpose OS (111); see fig. 1C; paragraph [0049]**) and at least one control service to control an execution of each requested processing of the hardware resources according to a function call from the application (**i.e. the control service interprets a processing request issued by the applications (330) and generates an acquisition request of hardware resources; see paragraphs [0058]-[0060]**),

wherein interprocess communication is performed between the control service and the application (**i.e. the system uses an API that enables reception, or communication, of a processing request from the application to the control service; see fig. 3; paragraphs [0058]-[0060]**).

Therefore, in view of Morita '326, it would have been obvious to one of ordinary skill at the time the invention was made to have **the preamble limitations of** a platform that exists between the application and the hardware resources, the platform including an OS and at least one control service to control an execution of each requested processing of the hardware resources according to a function call from the application, wherein interprocess communication is performed between the control service and the application incorporated in the device of Fukui, as modified by the features of Meade, in order to mount applications on a platform consisting of a common system service and a general purpose OS to increase the productivity of the apparatus (as stated in Morita '326 paragraph [0055]).

Re claim 3: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

Fukui '135 discloses the image forming apparatus as claimed in claim 2, wherein the application information is information that is included in an execution file of the application **(i.e. an execution file is considered to be a program since the file is meant to be interpreted as a program by the CPU of the copier. In the system, when the managing unit searches for a program and uses an ID code, the ID code associated with the program is found in order to find the appropriate program to utilize. This ID code can be within the program that will be used with the additional function. Also, when the copier is first powered on, the additional function's program version data is compared to the version data of the copier. In this scenario, the version data, considered as the application information, is within the respective program of the additional function. The identification code is used to communicate the version information of the additional function. With this identification code, the image forming apparatus can determine if another software program used to utilize the additional function is needed; see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65).**

Re claim 4: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

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Fukui '135 discloses the image forming apparatus as claimed in claim 1, wherein the application information obtaining part obtains the application information from a file separate from the application **(i.e. an execution file is considered to be a program since the file is meant to be interpreted as a program by the CPU of the copier. When the managing unit (2203) searches for an updating program to send to the copier, the managing unit uses the ID code of the additional function and copier to find the appropriate program. Since the ID code is associated with the program used for the additional function, then the ID code, or version data, is included in the program of the additional function. In this example, the execution file that is not on the copier pertaining to the additional function but in the memory device (2402) of the external managing unit then this is considered as additional function information from a program, or execution file, separate from the additional function on the copier. The version data on the copier of the additional function will be different from the one being searched for since the system is looking for an updated program. The updated program will have version data or an ID code related to the updated software to be loaded on the printer; see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65).**

Re claim 5: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

Fukui '135 discloses the image forming apparatus as claimed in claim 3, wherein the application information obtaining part obtains the application information by provisionally launching the application **(i.e. provisionally launching the additional function is merely obtaining information about the additional function from the additional function to the CPU of the copier. In Fukui '135, the copier (301) obtains additional function information from the program of the additional function. Information regarding the version and control data is given to the copier body (301); see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65).**

Re claim 6: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

Fukui '135 discloses the image forming apparatus as claimed in claim 5, wherein the application information obtaining part obtains the application information by using interprocess communication between the application information obtaining part and the application **(i.e. the copier body has the additional function attachment to the copier body. The communication between the additional function program and the CPU of the copier body is representative of interprocess communication between an application information obtaining part and an application, or the copier body and the additional function since the program of the sorter communicates the version data of the program to the CPU of the printer; see figs.**

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17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65).

Re claim 7: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

Fukui '135 discloses the image forming apparatus as claimed in claim 5, further comprising:

a processor **(element 602; see fig. 3);**

wherein the application causes the image forming apparatus to perform:

a step of determining whether to provisionally launch the application or to normally launch the application according to a request from the application information obtaining part **(i.e. when the additional function is attached to the copier body, the information pertaining to the version information and control program is sent to the copier body (301). The system determines to sends this information once the connection of the additional function is detected. Once the determination of the efficiency of the version data and the control program is determined, then the decision to normally perform the function of the additional function can be performed. Again, once the copier body utilizes the proper version and program information for the additional function, the determination or performance of a normal launch of the additional function can be performed. Provisionally launching the additional function is merely obtaining information about the additional function control program from the additional function to the CPU of the**

copier. In Fukui '135, the copier (301) obtains additional function information from the program of the additional function. Information regarding the version and control data is given to the copier body (301); see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65); and

a step of providing the application information to the application information obtaining part if the application is provisionally launched (**i.e. provisionally launching the additional function is merely obtaining information about the additional function from the additional function program given to the CPU of the copier. In Fukui '135, the copier (301) obtains additional function information from the program of the additional function. Information regarding the version and control data is given to the copier body (301); see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65).**

Re claim 8: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

Fukui '135 discloses the image forming apparatus as claimed in claim 1, further comprising:

a storage configured to store the application information obtained by the application information obtaining part (**i.e. the copier body contains nonvolatile RAM (629) that is utilized in order to write updating programs onto the memory; see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65).**

Re claim 9: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

Fukui '135 discloses the image forming apparatus as claimed in claim 8, wherein the storage is at least one of a hard disk, a nonvolatile memory and a memory card, and the application information obtaining part is configured to obtain the application information by reading information stored in the storage **(i.e. once the updating programs are written to the memory, the copier body can utilize the memory to obtain the additional function information about the additional function from the control program information written in the nonvolatile RAM (629); see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65).**

Re claim 10: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

Fukui '135 discloses the image forming apparatus as claimed in claim 1, wherein the application information obtaining part is configured to obtain the application information that includes a product ID that is specific to the application **(i.e. in Fukui '135, the identification code used can be considered as a product ID since the identification code is specific for the particular additional function and the additional function control program that identifies the additional function; see**

figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65).

Re claim 11: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

Fukui '135 discloses the image forming apparatus as claimed in claim 10, wherein the application information obtaining part is configured to obtain the application that further includes at least one of a vendor name, an application name, version information and resource information **(i.e. Fukui '135 discloses the additional function information as version data; see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65).**

Re claim 12: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

Fukui '135 discloses the image forming apparatus as claimed in claim 10, further comprising:

a storage configured to store product IDs of installable applications **(i.e. the ID codes of particular additional functions and the related control programs are stored in the image forming apparatus and the managing unit. These two units store the ID codes of the addition function programs that are installable; see figs. 17 and 18; col. 14, lines 28-67 and col. 15, line 1 - col. 18, line 65), and**

wherein the determination part is configured to determine whether a target application is installable by checking whether a product ID of the target application is stored **(i.e. once a additional function sends the type data and the version data, which can be the ID code, the copier checks the ROM (612) for the incoming data from the additional function attached to the copier body. The apparatus checks the ROM and RAM to see if the version data and other program information match the contents stored in the RAM and ROM. This determines whether to install the information related to the ID code in order to use the additional function or to not install any control program in order to use the contents that match the information stored in the RAM and ROM to control the additional function; see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65).**

Re claim 13: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

Fukui '135 discloses the image forming apparatus as claimed in claim 1, further comprising:

hardware resources for an image forming process **(i.e. the copier body (301) has a plurality of hardware resources, such as a sorter, facsimile and other resources, that are used for the image forming apparatus; see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65);**

control services for controlling the hardware resources (**i.e. in the system, the programs associated with the additional functions and the copier are used to control the functions of the overall image forming apparatus with the additional functions attached to the copier body; see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65**); and

a virtual application service that operates as a client process for the control services and operates as a sever process for the application (**i.e. the copier body operates as the client process for controlling the device and additional functions through the control programs received from the additional peripherals, external memory or an external device. The copier body also acts as a server application communicating with the other external devices for stored programs to be utilized by the copier body; see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65**).

Re claim 14: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

Fukui '135 discloses the image forming apparatus as claimed in claim 13, wherein the virtual application service includes the application information obtaining part (**i.e. the copier body (301) is utilized to obtain additional function information, such as the ID code, version data or control program information, from either a peripheral device or an external device connected to the copier body; see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65**).

Re claim 15: Fukui '135 discloses a method for installing applications in an image forming apparatus including hardware resources for image formation (**i.e. the printer contains actual scanning and printing units, considered as hardware resources for image formation; see col. 4, ln 40 – col. 5, ln 40**), an application for performing processes on the image formation (**i.e. different applications on the system are used to store data, fax data and perform printing of the data; see col. 12, ln 38 – col. 13, ln 16**) and a new application that performs interprocess communication with the control service in the same way as the application can be installed in the image forming apparatus (**i.e. in the system, the programs that are installed in the system are used to communicate with the CPU(b) (602), which controls the whole printing device in order for the image forming device to perform the associated feature. Both the old and new program, or application, installed on the apparatus communicates to the CPU(b) (602) in the same manner except that the apparatus has made the determination that the older program can not help the apparatus perform the additional function added to the system; see col. 7, ln 8-col. 8, ln 53, col. 14, ln 28-67 and col. 15, ln 1-52**), the method comprising:

obtaining, from the new application, application information of the new application that includes information (**i.e. in the procedure shown in figure 18, the copier body (301) checks to see if a version of the additional function, considered as the application, on the copier can be performed on efficiently on the copier. If it cannot be performed on the copier efficiently, the additional function is**

considered to be not installable and sends a request to the managing unit (2203) to send a new program to the copier so that the additional function can be installed and utilized in an efficient manner on the copier. The information that is included in the application information is considered as the identification code that is used to communicate the version information of the additional function. With this identification code, the image forming apparatus can determine if another software program used to utilize the additional function is needed and if the software program is acquired, it is considered as a new program being installed on the apparatus; see figs. 17 and 18; col. 14, lines 28-67 and col. 15, lines 1-52).

However, Fukui '135 fails to specifically teach information indicating whether the new application is installable in the image forming apparatus and determining whether the new application is installable in the image forming apparatus based on the application information.

However, this is well known in the art as evidenced by Meade '966. Meade '966 discloses information indicating whether the new application is installable in the image forming apparatus **(i.e. in the system, the printer checks the version number of the printer's current software to the latest software available. If the versions are the same, the printer determines that the software that is present at a pointer is not installable since the latest, or newest, version is already present on the printer. In another scenario with the use of the host computer, the user is able to not authorize the update of the software to the printer, which is obtaining new**

software to replace the old version software. The software and the updated versions of the software are stored in the software component of the memory (320) in the printer. The above scenarios are both examples of the software having information pertaining to the programs that indicate whether the software is going to be installed in the printer's memory; figs. 1-3; paragraphs [0036]-[0045] and [0057]-[0059]); and

determining whether the new application is installable in the image forming apparatus based on the application information (i.e. in the system, depending on the version of the current software on the printer and the version at the pointer on the vender's or manufacturer's site, the printing system determines if the version used as an update is going to be installed in the printer. If it is determined that the software versions are the same, the software is determined to be not installable since it the present program version is already on the printer. If the two are different with the update having a later version, the program is determined to be installable in the printer's memory based on the version information and this program is a new program since it has a different version from the previous software stored in memory; figs. 1-3; paragraphs [0036]-[0045] and [0057]-[0059]).

Therefore, in view of Meade '966, it would have been obvious to one of ordinary skill at the time the invention was made to have the method step of having information indicating whether the new application is installable in the image forming apparatus and determining whether the new application is installable in the image forming apparatus

based on the application information in order to determine if the system software should be updated (as stated in Meade '966 paragraph [0009]).

However, Fukui '135 in view of Meade '966 fails to specifically teach **the preamble limitations of** a platform that exists between the application and the hardware resources, the platform including an OS and at least one control service to control an execution of each requested processing of the hardware resources according to a function call from the application, wherein interprocess communication is performed between the control service and the application.

However, this is well known in the art as evidenced by Morita '326. Morita '326 discloses **the preamble limitations of** a platform that exists between the application and the hardware resources (**i.e. Morita contains the feature of being able to add and delete new applications to the printing system similar to Fukui and Meade. However, Morita '326 discloses a platform that is interposed between a common system service and an operating system, as shown in figure 1C; see fig. 1C; paragraphs [0018], [0049] and [0080],**

the platform including an OS (**i.e. the general purpose OS (111); see fig. 1C; paragraph [0049]**) and at least one control service to control an execution of each requested processing of the hardware resources according to a function call from the application (**i.e. the control service interprets a processing request issued by the applications (330) and generates an acquisition request of hardware resources; see paragraphs [0058]-[0060],**

wherein interprocess communication is performed between the control service and the application **(i.e. the system uses an API that enables reception, or communication, of a processing request from the application to the control service; see fig. 3; paragraphs [0058]-[0060])**.

Therefore, in view of Morita '326, it would have been obvious to one of ordinary skill at the time the invention was made to have **the preamble limitations of** a platform that exists between the application and the hardware resources, the platform including an OS and at least one control service to control an execution of each requested processing of the hardware resources according to a function call from the application, wherein interprocess communication is performed between the control service and the application incorporated in the device of Fukui, as modified by the features of Meade, in order to mount applications on a platform consisting of a common system service and a general purpose OS to increase the productivity of the apparatus (as stated in Morita '326 paragraph [0055]).

Re claim 16: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

Fukui '135 discloses the method as claimed in claim 15, wherein the step of obtaining application information comprises obtaining the application information from the application **(i.e. the copier body performs the function of obtaining additional function information from the additional function as soon as the copier is powered on and realizes it has an additional function attached to the copier. The**

additional function program is considered as the application and the version data about the additional function is considered to be application information. The information that is included in the application information is considered as the identification code that is used to communicate the version information of the additional function. With this identification code, the image forming apparatus can determine if another software program used to utilize the additional function is needed; see figs. 17 and 18; col. 14, lines 28-67 and col. 15, line 1 – col. 18, line 65).

Re claim 17: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

Fukui '135 discloses the method as claimed in claim 16, wherein the step of obtaining application information comprises obtaining the application information that is included in an execution file of the application (**i.e. an execution file is considered to be a program since the file is meant to be interpreted as a program by the CPU of the copier. In the system, when the managing unit searches for a program and uses an ID code, the ID code associated with the program is found in order to find the appropriate program to utilize. This ID code can be within the program that will be used with the additional function. Also, when the copier is first powered on, the additional function's program version data is compared to the version data of the copier. In this scenario, the version data, considered as the application information, is within the respective program of the additional function. The**

identification code is used to communicate the version information of the additional function. With this identification code, the image forming apparatus can determine if another software program used to utilize the additional function is needed; see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65).

Re claim 18: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

Fukui '135 discloses the method as claimed in claim 15, wherein the step of obtaining application information comprises obtaining the application information from a file separate from the application **(i.e. an execution file is considered to be a program since the file is meant to be interpreted as a program by the CPU of the copier. When the managing unit (2203) searches for an updating program to send to the copier, the managing unit uses the ID code of the additional function and copier to find the appropriate program. Since the ID code is associated with the program used for the additional function, then the ID code, or version data, is included in the program of the additional function. In this example, the execution file that is not on the copier pertaining to the additional function program but in the memory device (2402) of the external managing unit then this is considered as additional function information from a program, or execution file, separate from the additional function on the copier. The version data on the copier of the additional function will be different from the one being searched for since the**

system is looking for an updated program; see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65).

Re claim 19: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

Fukui '135 discloses the method as claimed in claim 17, wherein the step of obtaining application information comprises obtaining the application information by provisionally launching the application **(i.e. provisionally launching the additional function is merely obtaining information about the additional function from the additional function to the CPU of the copier. In Fukui '135, the copier (301) obtains additional function information from the program of the additional function. Information regarding the version and control data is given to the copier body (301); see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65).**

Re claim 20: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

Fukui '135 discloses the method as claimed in claim 19, wherein the step of obtaining application information comprises obtaining the application information from the application by using interprocess communication **(i.e. the copier body has the additional function attachment to the copier body. The communication between the additional function program and the CPU of the copier body is representative**

of interprocess communication between an application information obtaining part and an application, or the copier body and the additional function; see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65).

Re claim 21: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

Fukui '135 discloses the method as claimed in claim 19, further comprising:

determining whether to provisionally launch the application or to normally launch the application according to a request **(i.e. when the additional function is attached to the copier body, the information pertaining to the version information and control is sent to the copier body (301). The system determines to sends this information once the connection of the additional function is detected. Once the determination of the efficiency of the version data and the control program is determined, then the decision to normally perform the function of the additional function can be performed. Again, once the copier body utilizes the proper version and program information for the additional function, the determination or performance of a normal launch of the additional function can be performed. Provisionally launching the additional function is merely obtaining information about the additional function from the additional function to the CPU of the copier. In Fukui '135, the copier (301) obtains additional function information from the program of the additional function. Information regarding the version**

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and control data is given to the copier body (301); see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65); and

providing the application information to the image forming apparatus if the application is provisionally launched (**i.e. provisionally launching the additional function is merely obtaining information about the additional function from the additional function to the CPU of the copier. In Fukui '135, the copier (301) obtains additional function information from the program of the additional function. Information regarding the version and control data is given to the copier body (301); see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65).**

Re claim 22: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

Fukui '135 discloses the method as claimed in claim 15, further comprising:

of storing the application information in a storage in the image forming apparatus (**i.e. the copier body contains nonvolatile RAM (629) that is utilized in order to write updating programs onto the memory; see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65).**

Re claim 23: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

Fukui '135 discloses the method as claimed in claim 22, wherein the step of storing the application information in the storage comprises storing the application information in the storage that is at least one of a hard disk, a nonvolatile memory and a memory card **(i.e. the copier body contains nonvolatile RAM (629) that is utilized in order to write updating programs onto the memory. The information that is stored pertains to the ID code or version code of the additional function program used to operate the additional function on the copier apparatus. The ID code or the version code are both considered as application information since this information permits the copier to know whether the ID code or version code pertaining to the additional function control program is stored in the copier body; see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65), and**

the step of obtaining application information comprises obtaining the application information by reading information stored in the storage **(i.e. once the updating programs are written to the memory, the copier body can utilize the memory to obtain the additional function information about the additional function from the information written in the nonvolatile RAM (629). In the system, when comparing the program ID code of the additional function to the ID code stored in the printer apparatus, this is comparison determines whether an updating program needs to be installed or downloaded on the printer. If the copier body contains the same ID code or version code, which is considered as the application information, then the copier body stores this information in the ROM (612) or RAM (614) of the**

copier. This is an example of a storage unit storing information related to the control program of the additional function; see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65).

Re claim 24: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

Fukui '135 discloses the method as claimed in claim 15, wherein the step of obtaining application information comprises obtaining application information that includes a product ID that is specific to the application **(i.e. in Fukui '135, the identification code used can be considered as a product ID since the identification code is specific for the particular additional function and the additional function program that identifies the additional function; see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65).**

Re claim 25: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

Fukui '135 discloses the method as claimed in claim 24, wherein the step of obtaining application information comprises obtaining application information that further includes at least one of a vendor name, an application name, version information and resource information **(i.e. Fukui '135 discloses the additional function information as version data; see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65).**

Re claim 26: The teachings of Fukui '135 in view of Meade '966 and Morita '326 are disclosed above.

Fukui '135 discloses the method as claimed in claim 24, storing product IDs of installable applications in a storage **(i.e. the ID codes of particular additional functions and additional function programs are stored in the image forming apparatus and the managing unit. These two units store the ID codes of the addition function programs that are installable; see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65), and**

wherein the step of determining whether the application is installable comprises determining whether a target application is installable by checking whether a product ID of the target application is stored **(i.e. once a additional function sends the type data and the version data, which can be the ID code, the copier checks the ROM (612) for the incoming data from the additional function attached to the copier body. The apparatus checks the ROM and RAM to see if the version data and other program information match the contents stored in the RAM and ROM. This determines whether to install the program information on the copier in order to use the additional function or to use the program contents that match the information previously stored in the RAM and ROM to control the additional function; see figs. 17 and 18; col. 14, lines 28-67, col. 15, lines 1-52, col. 17, lines 1-67 and col. 18, lines 1-65).**

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Re claim 28: Fukui '135 discloses a computer readable storage medium having embedded therein instruction, which when executed by a processor, cause the processor to perform a method for installing applications in an image forming apparatus **(i.e. in the system, the external managing unit communicates with the system of the copier to install needed control programs to utilize the functionality of the additional function peripherals; see col. 7, line 65 – col. 8, line 9, col. 14, lines 28-67 and col. 15, lines 1-52)** including hardware resources for image formation **(i.e. the printer contains actual scanning and printing units, considered as hardware resources for image formation; see col. 4, ln 40 – col. 5, ln 40)**, an application for performing processes on the image formation **(i.e. different applications on the system are used to store data, fax data and perform printing of the data; see col. 12, ln 38 – col. 13, ln 16)** and a new application that performs interprocess communication with the control service in the same way as the application can be installed in the image forming apparatus **(i.e. in the system, the programs that are installed in the system are used to communicate with the CPU(b) (602), which controls the whole printing device in order for the image forming device to perform the associated feature. Both the old and new program, or application, installed on the apparatus communicates to the CPU(b) (602) in the same manner except that the apparatus has made the determination that the older program can not help the apparatus perform the additional function added to the system; see col. 7, ln 8-col. 8, ln 53, col. 14, ln 28-67 and col. 15, ln 1-52)**, comprising:

obtaining, from the new application, application information of the new application that includes information **(i.e. in the procedure shown in figure 18, the copier body (301) checks to see if a version of the additional function, considered as the application, on the copier can be performed on efficiently on the copier. If it cannot be performed on the copier efficiently, the additional function is considered to be not installable and sends a request to the managing unit (2203) to send a new program to the copier so that the additional function can be installed and utilized in an efficient manner on the copier. The information that is included in the application information is considered as the identification code that is used to communicate the version information of the additional function. With this identification code, the image forming apparatus can determine if another software program used to utilize the additional function is needed and if software is needed, the new program is obtained from the network and installed on the image forming apparatus; see figs. 17 and 18; col. 14, lines 28-67 and col. 15, lines 1-52).**

However, Fukui '135 fails to specifically teach information indicating whether the new application is installable in the image forming apparatus and determining whether the new application is installable in the image forming apparatus based on the application information.

However, this is well known in the art as evidenced by Meade '966. Meade '966 discloses information indicating whether the new application is installable in the image forming apparatus **(i.e. in the system, the printer checks the version number of the**

printer's current software to the latest, or newest, software available. If the versions are the same, the printer determines that the software that is present at a pointer is not installable since the latest version is already present on the printer. In another scenario with the use of the host computer, the user is able to not authorize the update of the software to the printer. The software and the updated versions of the software are stored in the software component of the memory (320) in the printer. The above scenarios are both examples of the software having information pertaining to the programs that indicate whether the software is going to be installed in the printer's memory and if there is an update available, new software is installed in memory; figs. 1-3; paragraphs [0036]-[0045] and [0057]-[0059]); and

determining whether the new application is installable in the image forming apparatus based on the application information (i.e. in the system, depending on the version of the current software on the printer and the version at the pointer on the vender's or manufacturer's site, the printing system determines if the version used as an update is going to be installed in the printer. If it is determined that the software versions are the same, the software is determined to be not installable since it the present program version is already on the printer. If the two are different with the update having a later, or newer, version, the new program is determined to be installable in the printer's memory based on the version information; figs. 1-3; paragraphs [0036]-[0045] and [0057]-[0059]).

Therefore, in view of Meade '966, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of information indicating whether the new application is installable in the image forming apparatus and determining whether the new application is installable in the image forming apparatus based on the application information in order to determine if the system software should be updated (as stated in Meade '966 paragraph [0009]).

However, Fukui '135 in view of Meade '966 fails to specifically teach **the preamble limitations of** a platform that exists between the application and the hardware resources, the platform including an OS and at least one control service to control an execution of each requested processing of the hardware resources according to a function call from the application, wherein interprocess communication is performed between the control service and the application.

However, this is well known in the art as evidenced by Morita '326. Morita '326 discloses **the preamble limitations of** a platform that exists between the application and the hardware resources (**i.e. Morita contains the feature of being able to add and delete new applications to the printing system similar to Fukui and Meade. However, Morita '326 discloses a platform that is interposed between a common system service and an operating system, as shown in figure 1C; see fig. 1C; paragraphs [0018], [0049] and [0080]),**

the platform including an OS (**i.e. the general purpose OS (111); see fig. 1C; paragraph [0049])** and at least one control service to control an execution of each requested processing of the hardware resources according to a function call from the

application **(i.e. the control service interprets a processing request issued by the applications (330) and generates an acquisition request of hardware resources; see paragraphs [0058]-[0060]),**

wherein interprocess communication is performed between the control service and the application **(i.e. the system uses an API that enables reception, or communication, of a processing request from the application to the control service; see fig. 3; paragraphs [0058]-[0060]).**

Therefore, in view of Morita '326, it would have been obvious to one of ordinary skill at the time the invention was made to have **the preamble limitations of** a platform that exists between the application and the hardware resources, the platform including an OS and at least one control service to control an execution of each requested processing of the hardware resources according to a function call from the application, wherein interprocess communication is performed between the control service and the application incorporated in the device of Fukui, as modified by the features of Meade, in order to mount applications on a platform consisting of a common system service and a general purpose OS to increase the productivity of the apparatus (as stated in Morita '326 paragraph [0055]).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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5. Nomura '630 (US Pub No 2002/0002630) discloses a system where a server is given the operational environment of an image forming apparatus and judges what whether certain programs are installable on the image forming apparatus. Also, the image forming apparatus also judges whether a program is installable on itself.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chad Dickerson whose telephone number is (571)-270-1351. The examiner can normally be reached on Mon. thru Thur. 9:00-6:30 Fri. 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Lamb can be reached on (571)-272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. D./
/Chad Dickerson/
Examiner, Art Unit 2625

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/Twyler L. Haskins/

Supervisory Patent Examiner, Art Unit 2625